

## CLAIMS

What is claimed is:

1. A system, comprising:  
  
a local area network management system to manage and configure a network of routers;  
  
a wide area network management system to manage and configure a network of switches; and  
  
address registration information to be appended to a message sent between a first router of the network of routers and a first switch of the network of switches over a connection between the first router and the first switch.
2. The system of claim 1, wherein the address registration information comprises an interface index.
3. The system of claim 2, wherein the interface index comprises a slot number from which the appended message was sent.
4. The system of claim 2, wherein the interface index comprises a port number from which the appended message was sent.
5. The system of claim 1, wherein the address registration information comprises an Internet Protocol address.

6. The system of claim 1, wherein the address registration information comprises spare bytes.
7. The system of claim 1, wherein the router sends the appended message.
8. The system of claim 1, wherein the switch sends the appended message.
9. The system of claim 1, wherein the appended message is an enhanced local management interface message.
10. The system of claim 1, wherein the appended message is sent when the network of switches and the network of routers are first configured.
11. The system of claim 1, wherein the appended message is sent when the network of switches or the network of routers has a change in configuration.
12. The system of claim 1, wherein the appended message is sent at a regular interval.
13. The system of claim 1, wherein the local area network management system uses the address registration information to map the network of switches.

14. The system of claim 13, wherein the local area network management system configures the network of switches.
15. The system of claim 1, wherein the wide area network management system uses the address registration information to map the network of routers.
16. The system of claim 15, wherein the wide area network management system configures the network of routers
17. A method, comprising:  
appending address registration information to a message; and  
sending the message between a router of a router network and a switch of a switch network.
18. The method of claim 17, further comprising using the address registration information to map the router network from a wide area network management system controlling the switch network.
19. The method of claim 18, further comprising configuring the router network using the wide area network management system.

20. The method of claim 17, further comprising using the address registration information to map the switch network from a local area network management system controlling the router network.
21. The method of claim 20, further comprising configuring the switch network using the local area network management system.
22. The method of claim 17, wherein the address registration information comprises an Internet Protocol address.
23. The method of claim 17, wherein the address registration information comprises an interface index.
24. The method of claim 23, wherein the interface index comprises a slot number from which the appended message was sent.
25. The method of claim 23, wherein the interface index comprises a port number from which the appended message was sent.
26. The method of claim 17, wherein the address registration information comprises spare bytes.
27. The method of claim 17, wherein the router sends the appended message.

28. The method of claim 17, wherein the switch sends the appended message.
29. The method of claim 17, wherein the appended message is an enhanced local management interface message.
30. The method of claim 17, wherein the appended message is sent when the network of switches and the network of routers are first configured.
31. The method of claim 17, wherein the appended message is sent when the network of switches or the network of routers has a change in configuration.
32. The method of claim 17, wherein the appended message is sent at a regular interval.
33. A machine-readable storage medium tangibly embodying a sequence of instructions executable by the machine to perform a method comprising:  
appending address registration information to a message; and  
sending the message between a router of a router network and a switch of a switch network.

34. The machine-readable storage medium of claim 33, further comprising using the address registration information to map the router network from a wide area network management system controlling the switch network.
35. The machine-readable storage medium of claim 34, further comprising configuring the router network using the wide area network management system.
36. The machine-readable storage medium of claim 33, further comprising using the address registration information to map the switch network from a local area network management system controlling the router network.
37. The machine-readable storage medium of claim 36, further comprising configuring the switch network using the local area network management system.
38. The machine-readable storage medium of claim 33, wherein the address registration information comprises an Internet Protocol address.
39. The machine-readable storage medium of claim 33, wherein the address registration information comprises an interface index.
40. The machine-readable storage medium of claim 39, wherein the interface index comprises a slot number from which the appended message was sent.

41. The machine-readable storage medium of claim 39, wherein the interface index comprises a port number from which the appended message was sent.
42. The machine-readable storage medium of claim 33, wherein the address registration information comprises spare bytes.
43. The machine-readable storage medium of claim 33, wherein the router sends the appended message.
44. The machine-readable storage medium of claim 33, wherein the switch sends the appended message.
45. The machine-readable storage medium of claim 33, wherein the appended message is an enhanced local management interface message.
46. The machine-readable storage medium of claim 33, wherein the appended message is sent when the network of switches and the network of routers are first configured.
47. The machine-readable storage medium of claim 33, wherein the appended message is sent when the network of switches or the network of routers has a change in configuration.

48. The machine-readable storage medium of claim 33, wherein the appended message is sent at a regular interval.
49. A system, comprising:  
a means for appending address registration information to a message; and  
a means for sending the message between a router of a router network and a switch of a switch network.
50. The system of claim 49, further comprising a means for using the address registration information to map the router network from a wide area network management system controlling the switch network.
51. The system of claim 50, further comprising a means for configuring the router network using the wide area network management system.
52. The system of claim 49, further comprising a means for using the address registration information to map the switch network from a local area network management system controlling the router network.
53. The system of claim 52, further comprising a means for configuring the switch network using the local area network management system.



54. The system of claim 49, wherein the address registration information comprises an Internet Protocol address.
55. The system of claim 49, wherein the address registration information comprises an interface index.
56. The system of claim 55, wherein the interface index comprises a slot number from which the appended message was sent.
57. The system of claim 55, wherein the interface index comprises a port number from which the appended message was sent.
58. The system of claim 49, wherein the address registration information comprises spare bytes.
59. The system of claim 49, wherein the router sends the appended message.
60. The system of claim 49, wherein the switch sends the appended message.
61. The system of claim 49, wherein the appended message is an enhanced local management interface message.

62. The system of claim 49, wherein the appended message is sent when the network of switches and the network of routers are first configured.
63. The system of claim 49, wherein the appended message is sent when the network of switches or the network of routers has a change in configuration.
64. The system of claim 49, wherein the appended message is sent at a regular interval.
65. A router, comprising:  
a routing unit to send a message to a first switch of a network of switches;  
a connection to connect the routing unit to the first switch; and  
an interface to append an address registration information to the message.
66. The router of claim 65, wherein the address registration information comprises an interface index.
67. The router of claim 66, wherein the interface index comprises a slot number from which the appended message was sent.
68. The router of claim 66, wherein the interface index comprises a port number from which the appended message was sent.

69. The router of claim 65, wherein the address registration information comprises an Internet Protocol address.
70. The router of claim 65, wherein the address registration information comprises spare bytes.
71. The router of claim 65, wherein the appended message is an enhancement local management interface message.
72. The router of claim 65, wherein the appended message is sent at a regular interval.
73. A switch, comprising:  
a switching unit to send a message to a first router of a network of routers;  
a connection to connect the switching unit to the first router; and  
an interface to append an address registration information to the message.
74. The switch of claim 73, wherein the address registration information comprises an interface index.
75. The switch of claim 74, wherein the interface index comprises a slot number from which the appended message was sent.

76. The switch of claim 74, wherein the interface index comprises a port number from which the appended message was sent.
77. The switch of claim 73, wherein the address registration information comprises an Internet Protocol address.
78. The switch of claim 73, wherein the address registration information comprises spare bytes.
79. The switch of claim 73, wherein the appended message is an enhancement local management interface message.
80. The switch of claim 73, wherein the appended message is sent at a regular interval.
81. A method, comprising:  
appending address registration information to a message;  
sending the message between a router of a router network and a switch of a switch network;  
using the address registration information to map the router network from a wide area network management system controlling the switch network;  
configuring the router network using the wide area network management system;  
using the address registration information to map the switch network form a local area network management system controlling the router network; and

configuring the switch network using the local area network management system.

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